

WHAT IS CLAIMED IS:

1 1. A bubble-jet type ink jet printhead, comprising:
2 a substrate;
3 a plurality of chamber walls arranged parallel to one another on the substrate for dividing a
4 chamber into a plurality of unit chambers having a predetermined height, each of said plurality of
5 unit chambers are ink flow areas;
6 a bubble generating means provided for each unit chamber, said bubble generating means
7 comprising two unit heaters spaced apart by a predetermined distance on the substrate; and
8 a nozzle plate, attached to a top side of each of said plurality of chamber walls, said nozzle
9 plate being perforated by a plurality of nozzle holes, each nozzle hole corresponding to a region
10 between the two unit heaters of each bubble generating means, wherein ink is supplied from both
11 sides of each unit chamber.

1 2. The printhead of claim 1, wherein the two unit heaters of each bubble generating
2 means are electrically coupled to each other.

1 3. The printhead of claim 2, wherein the two unit heaters of each bubble generating
2 means are integrated.

1 4. The printhead of claim 2, wherein the two unit heaters of the bubble generating means

2 are spaced apart by a predetermined distance, between which an electrical connection member is
3 disposed.

1 5. The printhead of claim 1, wherein the unit heaters are arranged in a straight line
2 parallel to the chamber walls and between the chamber walls, said unit heaters each generate the
3 same thermal energy so as to form bubbles having the same size.

1 6. The printhead of claim 2, wherein the unit heaters are arranged in a straight line
2 parallel to the chamber walls and between the chamber walls, said unit heaters each generate the
3 same thermal energy so as to form bubbles having the same size.

1 7. The printhead of claims 3, wherein the unit heaters are arranged in a straight line
2 parallel to the chamber walls and between the chamber walls, said unit heaters each generate the
3 same thermal energy so as to form bubbles having the same size.

1 8. The printhead of any of claims 4, wherein the unit heaters are arranged in a straight
2 line parallel to the chamber walls and between the chamber walls, said unit heaters each generate the
3 same thermal energy so as to form bubbles having the same size.

1 9. The printhead of claim 2, wherein sides of the two unit heaters of the bubble
2 generating means that are facing each other are coupled to a common signal line, and wherein sides

3 of the two unit heaters opposite said sides facing each other are coupled to an individual signal line
4 electrically separate from said common signal line.

1 10. The printhead of claim 3, wherein sides of the two unit heaters of the bubble
2 generating means that are facing each other are coupled to a common signal line, and wherein sides
3 of the two unit heaters opposite said sides facing each other are coupled to an individual signal line
4 electrically separate from said common signal line.

1 11. The printhead of claim 4, wherein sides of the two unit heaters of the bubble
2 generating means that are facing each other are coupled to a common signal line, and wherein sides
3 of the two unit heaters opposite said sides facing each other are coupled to an individual signal line
4 electrically separate from said common signal line.

1 12. The printhead of claim 2, wherein sides of said two unit heaters facing each other are
2 coupled to a serial connection unit while sides of said two unit heaters opposite said sides facing
3 each other are coupled to electrical signal lines, respectively.

1 13. The printhead of claim 3, wherein sides of said two unit heaters facing each other are
2 coupled to a serial connection unit while sides of said two unit heaters opposite said sides facing
3 each other are coupled to electrical signal lines, respectively.

1 14. The printhead of claim 12, wherein said electrical signal lines comprise:
2 a common signal line; and
3 an individual signal line, wherein said individual line is held at a different potential than a
4 potential of said common signal line.

1 15. The printhead of claim 3, wherein exterior ends of the two unit heaters of the bubble
2 generating means are connected to an individual signal line integrated therewith.

1 16. The printhead of claim 15, wherein a common signal line is electrically coupled to
2 the middle portions of a plurality of bubble generating means.

1 17. The printhead of claim 15, wherein a first insulating layer is disposed between a
2 common signal line and the bubble generating means, said first insulating layer being perforated by
3 a contact hole providing electrical contact between the common signal line and a connection portion
4 of both unit heaters.

1 18. The printhead of claim 16, wherein a first insulating layer is disposed between said
2 common signal line and the bubble generating means, said first insulating layer being perforated by
3 a contact hole providing electrical contact between the common signal line and a connection portion
4 of both unit heaters.

1 19. The printhead of claim 1, wherein a second insulating layer is formed over a common
2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 20. The printhead of claim 2, wherein a second insulating layer is formed over a common
2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 21. The printhead of claim 3, wherein a second insulating layer is formed over a common
2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 22. The printhead of claim 4, wherein a second insulating layer is formed over a common
2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 23. The printhead of claim 5, wherein a second insulating layer is formed over a common
2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 24. The printhead of claim 6, wherein a second insulating layer is formed over a common

2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 25. The printhead of claim 7, wherein a second insulating layer is formed over a common
2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 26. The printhead of claim 8, wherein a second insulating layer is formed over a common
2 signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 27. The printhead of claim 15, wherein a second insulating layer is formed over a
2 common signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 28. The printhead of claim 16, wherein a second insulating layer is formed over said
2 common signal line and a first insulating layer and the chamber wall is formed on top of said second
3 insulating layer.

1 29. The printhead of claim 17, wherein a second insulating layer is formed over said
2 common signal line and said first insulating layer and the chamber wall is formed on top of said

3 second insulating layer.

1 30. The printhead of claim 18, wherein a second insulating layer is formed over said
2 common signal line and said first insulating layer and the chamber wall is formed on top of said
3 second insulating layer.

1 31. The printhead of claim 9, wherein the nozzle plate is separated from the substrate a
2 predetermined space and a common chamber containing ink is disposed between the nozzle plate
3 and the substrate.

1 32. The printhead of claim 10, wherein the nozzle plate is separated from the substrate
2 a predetermined space and a common chamber containing ink is disposed between the nozzle plate
3 and the substrate.

1 33. The printhead of claim 11, wherein the nozzle plate is separated from the substrate
2 a predetermined space and a common chamber containing ink is disposed between the nozzle plate
3 and the substrate.

1 34. A method of manufacturing bubble-jet type ink jet printhead, comprising the steps of:
2 depositing, patterning, and etching a resistive material on a silicon substrate;
3 depositing, patterning, and etching an individual signal line over a portion of said resistive

material;

depositing a first electrically insulating layer over said silicon substrate;

etching a hole in said first electrically insulating layer exposing a portion of said resistive material absent of said individual signal line;

depositing, patterning, and etching a common signal line, said common signal line being in electrical contact with said resistive material via said hole in said first electrically insulating layer;

depositing a second electrically insulating layer over said silicon substrate;

etching through a portion of said first and second insulating layers to expose a portion of said individual signal line in a region absent of said resistive material;

depositing, patterning, and etching a film to form a plurality of chamber walls, a first of said plurality of chamber walls being on top of a substantial portion of said individual signal line, and a second of said plurality of chamber walls being parallel to said first chamber wall, said second chamber wall being on an opposite side of said hole in said first insulating layer than said first chamber wall; and

attaching a nozzle plate to a top portion of said plurality of chamber walls, said nozzle plate being perforated by a plurality of nozzle holes, one of said plurality of nozzle holes being directly above said hole in said first insulating layer.

35. The method of claim 34, wherein said resistive material is patterned to be "P" shaped.

36. The method of claim 35, wherein said individual line covers a straight portion of said

2 “P” shaped resistive layer.

1 37. The method of claim 36, wherein said hole in said first insulating layer is located over
2 a center of a curved portion of said “P” shaped resistive layer.

1 38. The method of claim 37, wherein one unit heater is located between one side of said
2 center of said curved portion of said resistive layer and said straight portion of said resistive layer
3 and another unit heater is located between another side of said center of said curved portion of said
4 resistive layer and said straight portion.